

2270 Industriel, Montreal (Laval) Canada H7S 1P9 / Tél.: (514) 667-9769 Fax: (514) 667-6320

ORION "MATRIX" SERIES MODEL H-66

Spiral Semi-Automatic Medium Heavy Duty High Profile

Maximum Load Size	55"W x 55"L x 82"H
Weight Capacity	4,000 lbs. Dynamic, 8,000 lbs. Static
Utilities	115/1/60 20 Amp Service
Turntable	48"x48" Formed & Welded Octagonal Turntable w/ Skirt Structural Steel Plate 4 Point Swivel Caster Support
Turntable Drive	0 - 14 RPM Variable Turntable Speed DC Variable Speed Drive Motor Direct Heavy Duty ANSI Chain & Sprocket Drive Adjustable Electronic Soft Start Positive Alignment Feature
Control Features	CSA Approved, NEMA 12 Control Panel State-of-the-Art Allen Bradley Programmable Logic Control for Maximum
Flexibility	User Friendly Controls with Non-Proprietary Pushbuttons, and Switches Electronic Film Tension Control Adjustment on the Panel End of Cycle Film Force Release Separate Top and Bottom Wrap Count Selectors Variable Speed Film Carriage Up/Down Control Film Carriage Raise/Lower Switch (Manual) Cycle Pause On/Off Switch Photocell for Automatic Load Height Detection with On/Off Switch Turntable Jog Pushbutton Spiral Up or Up/Down Cycles
Film Delivery	20" Orion MultiStretch Power Prestretch Easy to Thread Film Carriage Electronic Film Tension Control Adjustment on the Panel Full Authority Film Dancer Bar with Variable Speed Output Heavy Duty ANSI Chain & Sprocket Ratio Control Maximum Available Pre-Stretch Ratio of 425% (Standard Setting of 245%) DC Variable Speed Drive Motor Adjustable Film Roping Bar on Chassis for Stronger Interlocking of Load and Pallet
Film Carriage Elevator Drive	Heavy Duty ANSI Chain Carriage Lift DC Variable Speed Drive Motor Structural "H" Beam Guidance Ultra-High Molecular Weight Carriage Guidance System
Structural Features	100% Structural Steel Construction Throughout Non-Proprietary, Locally Obtainable Components Throughout Easy Access to All Components Open Mechanical Design for Ease of Maintenance Forklift Portable Base Design Structural Steel "H" Beam Mast
Estimated Shipping Weight	1,200 lbs.



OPERATION MANUAL

For All Inquiries
Please Contact
Our Local Distributor

FOR U.S.A (Only)
1-800-333-6556

Table Of Contents

<u>Title</u>	<u>Page</u>
Unloading	5
Inspection	5
Machine Installation	5
Assembly Procedure	6
Control Panel	6
Machine Operation	6
-Power Switch	6
-Start and Emergency Stop	6
-Spiral Wrap Switch	7
-Carriage Control Switch	7
-Turntable Jog & Reinforce Wrap	7
-Photocell On/Off Switch	7
-Film Tension	7
-Carriage Speed	8
-Top Wraps 1,2,3...9	8
-Bottom Wraps 1,2,3...9	8
-Top & Bottom Wrap Counts Change	8
-Machine Wrapping Test	9
-To Load the Film	9
Proximity Sensor Adjustment	10
Chain Maintenance	10
Tower Raceways Maintenance	10
Reducer Oil Change	10
Motor Maintenance	11
Ring Bearing Maintenance (concerns the R machines)	11
Pneumatic System Maintenance (when applicable)	11
Appendix 1	
Standard Assemblies Part Lists	
Appendix 2	
Panel View , Control Panel Mount Two Position	
Electrical Boards Drawings and Adjustment Instructions	
Appendix 3	
Motor and Reducers General Information	
Appendix 4	
Proximity Sensor Adjustment, Film Feeding Pattern	
Appendix 5	
Customized Features (when applicable)	

Thank you for choosing ORION stretch-wrapping equipment. It is a wise choice which will benefit your company now and in the future.

ORION uses a unique combination of functional, rugged steel structure and sophisticated control systems to offer equipment high in durability and low in maintenance requirements. Our advanced control systems mean that ORION equipment can be operated safely and efficiently without the need for special operator expertise and skills.

Please read this manual carefully and keep it handy. Following these simple operating instructions will insure the safe and efficient performance of this machine and simple maintenance procedures will guarantee long and productive life of the equipment.

Notice:

Our manual covers standard features of the machine. Certain options may not be fully covered due to their unique application.

In order to acquire more information about custom made features of your machine and to provide quicker service, the following information is required when making an inquiry:

- 1) Model
- 2) Serial Number
- 3) Subassembly (see PART LIST)

SAFETY

H/L 66-11 (96T)
Prog. Version 1.0 (96T)
Dwg. # 301 151

ORION'S stretch wrappers should be operated with caution and common sense as any other industrial equipment. To prevent a potential injury and/or electrical shocks, careful operation of the machine and awareness of its many automatic functions is required.

NOTE: All electrical power and compressed air must to be disconnected prior to all inspection, maintenance or repair work.

UNLOADING

Machine can be easily unloaded and transported by a forklift with a minimum capacity of 2500 lb.

1. Carefully insert the forks into the lifting tubes to the maximum possible depth. Depending on the model, a forklift access may be either at the turntable end of the machine frame, the tower end or both.
2. Lift the machine (or other part of system) only to the necessary height to move it with no bouncing or friction on the floor.
3. Sit the machine down assuring uniform contact with the floor which is necessary to ensure correct and smooth operation.

INSPECTION

1. Remove all packing and supporting additions - these may include the blocks under the carriage and the restraining bar over the table.

NOTE: when removing the stretchwrap film covering the machine, care must be taken not to cut any of the electrical wires and / or polyurethane covering on the multistretch rollers.

2. Perform a visual inspection of the electrical and mechanical parts for loosened joints and / or broken connections. Any suspected shipping damage must be reported immediately to the freight carrier. Any transport damage can not be claimed to Orion Packaging Inc.

Items that are vulnerable to damage and must be inspected are as follows:

- motors and transmissions (Transmissions may require purge plugs which could have been unplugged for the transport purpose).
 - junction boxes
 - electrical conduits
 - proximity and limit switches
 - photocells
3. Check the turntable assembly to ensure that there is no crippling of the movable parts i.e. casters, center axle or drive assembly.
4. Verify the following:
- turntable drive system to confirm that the reducer to drive the chain is snug and properly aligned.
 - verify the wires tight conduits for crushed sections or loose fittings
 - verify the carriage to be sure that it is correctly aligned with the tower
 - verify the tension on the lift chain
 - verify all the dials and knobs on the control panel for smooth action.

MACHINE INSTALLATION

After the visual inspection has been completed the electrical power shall be connected as specified on the diagrams supplied with the machine.

An electrical diagram is provided with each machine in the envelope attached to the panel enclosure.

ASSEMBLY PROCEDURE

The structural frames of the machine have to be installed on a leveled floor. Locate the wrapper section into its final position, keeping the tower assembly away from any traffic.

The wrapper mainframe section must be bolted to the floor by the ½" concrete floor anchors (leg & shield or expandable type).

- Any wiring which has been disconnected to facilitate transport is marked with a number located on the junction box to which the wiring must be reconnected. Any wire run that appears too short or long may indicate that the position of the mechanical components is incorrect. Verify the status of all assemblies before proceeding.
- *The tower deviation from vertical must not exceed ¼" on the distance of 10 feet (angle: 0 degrees 6').

CONTROL PANEL

In the case of the free standing panel (console) place it adjacent to the system and anchor firmly to the floor. Connect the liquid tite (rigid conduit) to the main junction box located on the wrapper main frame next to the tower.

Before Starting Machine Operation

Verify that the machine is properly connected to the electrical source. The electrical requirements depends on the machine type and features. For this information, please see the machine electrical diagram provided with the machine operation manual.

The control panel layout for the L/H 66/10 machines is shown on the drawing # PN - 500 037. To understand the machine control system please read the MACHINE OPERATION.

CAUTION: before proceeding the machine operation familiarize yourself with the EMERGENCY-STOP button and all functions, switches and pushbuttons.

MACHINE OPERATION

POWER SWITCH (may be located on the panel door or side)

The Lockable Power Switch has two settings:

ON - connects a power source to the machine

OFF - disconnects the power source.

START AND EMERGENCY STOP SWITCHES

The START switch is used to start the cycle once the load is on the turntable. The cycle may be stopped on by pressing the STOP button. (may also be used for the choosing the range of counts of the top and bottom wraps- see TOP WRAPS and BOTTOM WRAPS).

NOTICE: In case of emergency, the push-pull STOP button interrupts all the machine electrical circuits. To continue the cycle the STOP push button should be pulled out and START button pressed for the machine restarting. Double pressing of the push - pull STOP button will reset the machine program and machine will be ready to apply the wrapping cycle from its beginning.

SPIRAL WRAP SWITCH

The SPIRAL WRAP switch has two positions:

UP - in this position the cycle will end after completing the specified number of top wraps, therefore, the machine will only wrap the load once, going up.

UP/DOWN - in this position the cycle will be completed after the load is wrapped in both the up and down directions.

NOTE: Machine is applying the TOP WRAP FIRST cycle.

CARRIAGE CONTROL SWITCH

The CARRIAGE CONTROL switch is a three position switch with the following settings:

RAISE - raises the carriage until the top limit switch on the tower is activated.

LOWER - lowers the carriage until the bottom limit switch on the tower is activated.

The switch is normally positioned in the middle where the carriage remains stationary. Turning the switch to the RAISE or LOWER will activate the carriage to move in the respective direction.

TURNTABLE JOG & REINFORCE WRAP

The turntable jog switch will rotate the turntable low speed when the switch positioned on the TOWER / TURNTABLE JOG. When the switch is released the turntable (rotary tower) will stop. The switch is inoperative during the wrap cycle.

When the same switch is positioned on the REINFORCE WRAP the carriage will be stationary until the switch is released.

PHOTOCELL ON/OFF SWITCH

The photocell switch has two settings:

ON - when turned ON, the photocell instructs the carriage to stop and begin the top wraps sequence once the top of the load is reached. The carriage will always stop at the top of the load regardless of its height. The photoswitch position on the track can be adjusted in order to make the carriage pass the top of the load and overlap the top.

OFF - when turned OFF, the photocell is inoperative and the carriage will stop when the top limit switch has been activated.

FILM TENSION

Film tension may be adjusted using the film tension control knob. It has a range of tension from 0 to 10 (0 to 4 the low range, 4 to 8 the most useful range for most of the films used by our customers, 8 to 10 as a very high range which may break some films).

CARRIAGE SPEED

The carriage speed potentiometer control can be used to control the amount of overlap the film will have during the wrap. The potentiometer has settings from 0 to 10, the higher settings being the fastest. High settings mean less film overlap because of faster carriage speed and low settings mean more film overlap because of lower carriage speed.

TOP WRAPS 1,2,3...9

Three position switch controls the number of wraps that may be applied on the top of the load. The machine is preset RANGE # 1 (top wraps: 1 or 2 or 3). To change the values of wrap see *TOP & BOTTOM WRAP COUNTS CHANGE*.

BOTTOM WRAPS 1,2,3,...9

Three position switch controls the number of wraps that may be applied on the bottom of the load. The machine is preset with RANGE # 1 (bottom wraps: 1 or 2 or 3) which may be applied. To change the values of wrap see *TOP & BOTTOM WRAP COUNTS CHANGE*.

TOP & BOTTOM WRAP COUNTS CHANGE

The Top & Bottom Wrap Selector Switches have three (3) ranges of wrap counts and operate independently of each other.

Range #1	Wrap values of 1-2-3
Range #2	Wrap values of 4-5-6
Range #3	Wrap values of 7-8-9

For the selection of any of these ranges for top and bottom wraps please do as follows:

Before proceeding ensure that machine is in MANUAL, STANDBY MODE (machine is powered on and all machine manual functions are enabled)

1. Press the STOP (Red) Button
2. Set the Top and Bottom wrap count selector switch to the position corresponding with the desired count range.:
 - 1= Range #1
 - 2= Range #2
 - 3= Range #3
3. Press the START (Green) pushbuttons and maintain for approximately 12 seconds.
4. Pull the STOP (Red) push-button out.
5. Perform standard machine reset procedure by double push-pull operation of the red mushroom stop button.

At this point machine is ready and new preset values are loaded

MACHINE WRAPPING TEST

Notice: It is advisable to test-run the equipment with several pallet loads before attempting to wrap using film. Please position the operator beside the EMERGENCY STOP push button.

Start up of the machine (system) may determine the need for the adjustment of:

- load height stop photoswitch (on the carriage)
- top limit switch position
- bottom limit switch position
- roping bar height adjustment

Before the test procedure adjust the wrapping cycle parameters i.e. top wraps, bottom wraps, height photocell on/off, film tension, carriage speed (those two parameters may be adjusted during the wrapping cycle).

TO LOAD THE FILM....

The film roll can be loaded on the mandrel of the carriage from either end of the roll. When using tacky film, please verify that the inward tacky surface of the film is inward on the load.

1. Disconnect power (turn off power switch).
2. Put the roll of film on the bottom mandrel
3. Install the top mandrel on top of the roll to prevent upward movement.
4. Introduce the roped tail of the film between the shafts of all rollers (as shown on the film threading pattern.) and pull it out to pass it around all three rollers (pressure roller and both rubber rollers).
5. Pass the film between the two dancer (aluminum) rollers (in certain applications the film has to be passed around one or two additional position aluminum rollers).
6. When the film feeding is completed - turn the power switch ON
7. Peel off the first few winds of the film (multistretch will run due to displacement of the dancer roller) and fix the film end onto the load.

The system is now ready to begin the first wrapping cycle.

PROXIMITY SENSOR ADJUSTMENT

Occasionally the Feed Back Proximity Sensor may need some adjustment. The position of the feed back proximity sensor against the cam is shown on drawing # 001 (Appendix 1)

Adjustment instructions:

- remove the carriage cover
- unbolt the two nuts holding the proximity switch -item # 1
- turn the Proximity sensor - (item # 2) to create the gap between the cam and the front side of proximity sensor about 1/8 ".
- tighten on the nuts securing the Proximity Sensor.
- turning the trim pot SPAN (Board 336-7) adjust the moment when motor starts to turn when dancer roller moved from its home position up to 1 1/2".

CHAIN MAINTENANCE

To clean the chain, wipe it with an oily cloth every month. When machine is working in a dusty and damp environment it may be necessary to repeat the cleaning operation more often.

With time the chain will tend to stretch. A loose elevator and turntable chain should be tightened at the chain tensioner, or by moving the reducer on its mounting plate.

NOTICE: Chain tension first adjustment must be done after the first two weeks of machine usage.

TOWER RACEWAYS MAINTENANCE

The Film Delivery System (Carriage) is sliding on the plastic guides attached behind its back plate. The section of the tower on which the plastic guides move (raceways) should be cleaned and regressed approximately every 600 hours of machine operation.

NOTICE: If the machine works in a dusty and corrosive environment, the raceways should be regreased more often. (at least each 100 hours).

REDUCER OIL CHANGE

On the reducing transmission , after the first week all external cap screws and plugs should be checked for tightness. It is recommended to change the oil every six month or at least 1800 hours of operation, whichever comes first. When adding or changing oil , the transmission should never be filled above the oil level mark indicated, because leakage and overheating may occur. Below is the list of the type of lubricant that should be used.

Manufacturer

American Oil Co..
Cities Service Oil Co.
Gulf Oil Corp.
Mobil Oil Corp.
Phillips Oil Corp.
Texaco Inc.
Shell Oil Co.
Union Oil Of Cal.

Lubricant

American Cyl Oil no:196-L
Citgo Cyl Oil 100-5
Gulf Senate 155
Mobil 600 W Suerr Cyl. Oil
Andes S 180
624 + 650T Cyl.Oil
Velvata Oil J82
Red Line Worm Gear Lube 140

MOTOR MAINTENANCE

An occasional inspection of the brushes should be made in order to establish a wear rate. Replacement brushes should be installed before old brushes wear to 9/16" long, measured on the long side. After replacing brushes run the motor near rated speed for at least 1/2 hour with no load to seat the new brushes. Failure to properly seat the new brushes may cause commutator damage and rapid wear of the new brushes. If the commutator becomes rough, scored or out of shape, a competent motor shop should disassemble it and resurface the commutator. With every third brush change, have a competent motor shop resurface the commutator and blow the carbon dust out of the motor.

RING BEARING MAINTENANCE (concerns the R machines)

The Ring Bearing is located under the turntable and should be relubricated internally and externally.

Internally: by injecting grease into all the lubrication nipples in succession until a collar of fresh grease appears around the perimeter of the ring. The relubrication interval suggested for these bearings, used in Stretch Wrapping Machinery is 750 hours, with a maximum period of 6 months. The lubricant should be fresh lubricant and inserted to make sure all surfaces are lubricated. These above parameters are provided as guideline and should be reviewed and corrected based on actual experience with the equipment as it develops. To arrive at the above values it was assumed maximum periodic rotation is 32 RPM and the equipment is used indoors where dust is moderate and moisture is low.

Lubricants of different manufacture recommended for the ring bearing lubrication are shown below:

Manufacturer	Lubricant
BP	Energrease LS2
Castrol	Speeroll AP2
Esso	Beacon 2
Gulf	Crown Grease 2
Mobil	Mobilus 2
Shell	Avania Grease R2
Texaco	Glissando FT 2
Valvoline	LB - 2

Externally: by lubricating and wiping the chain drive with oily cloth.

The frequency of lubrication depends on entirely upon the usage of the machine and environment in which the machine is placed (dust, moisture etc...).

Machines working under extremely dirty conditions should be lubricated every 400 operating hours but at minimum, every 2 months. Longer lubrication intervals may occur only when machine is working under very clean and dry conditions but should be not be longer than 6 months.

As the chain lubricants please use the most common chain lubricants on the market.

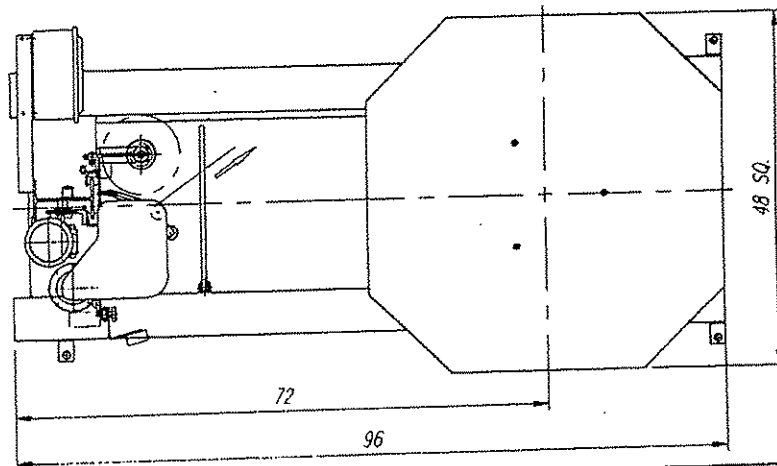
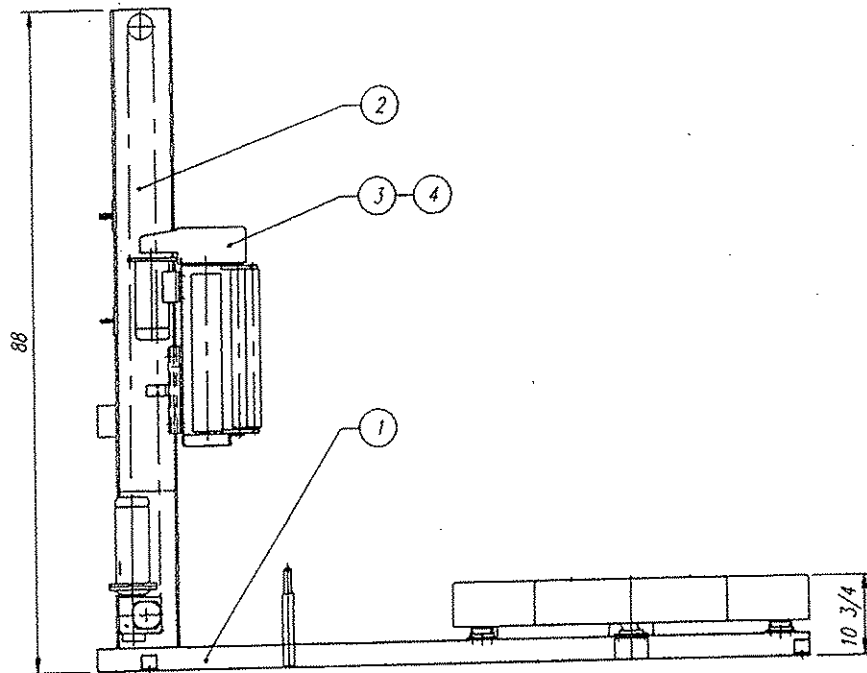
PNEUMATIC SYSTEM MAINTENANCE (when applicable)

The air supply system must be checked weekly and must be free from the moisture. In cold environments it may be necessary to drain the air supply system daily and lubricate using SAE #10 oil.

The air lubricator should be filled to approximately 3/4" of it's full capacity.

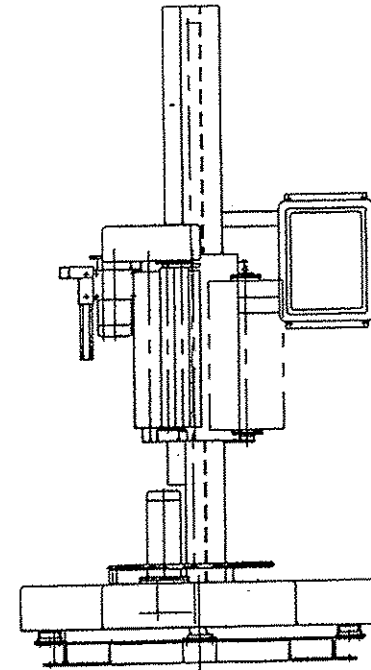
APPENDIX 1

#66/11



TOP VIEW

REQ'D - 1 PCE



TOTAL WEIGHT : ~ 1020 (1045) LBS

4	30" FILM CARRIAGE ASSEMBLY	C	411492	1	142
3	20" FILM CARRIAGE ASSEMBLY	C	411490	1	117
2	TOWER ASSEMBLY - WB x 18	C	412403	1	-
1	H-66/11 BASE ASSEMBLY	C	412402	1	774.3
No.	DESCRIPTION	DWG SIZE	PART No.	Q'ty	WEIGHT

REMARKS:

REMARKS:

HIGH PROFILE H-66/11 - LAYOUT

orion
PACKAGING INC.

2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

DATE: MAY-16-1996

DRAWN BY: ROGER F.

CHECKED BY:

JOB No.: STD

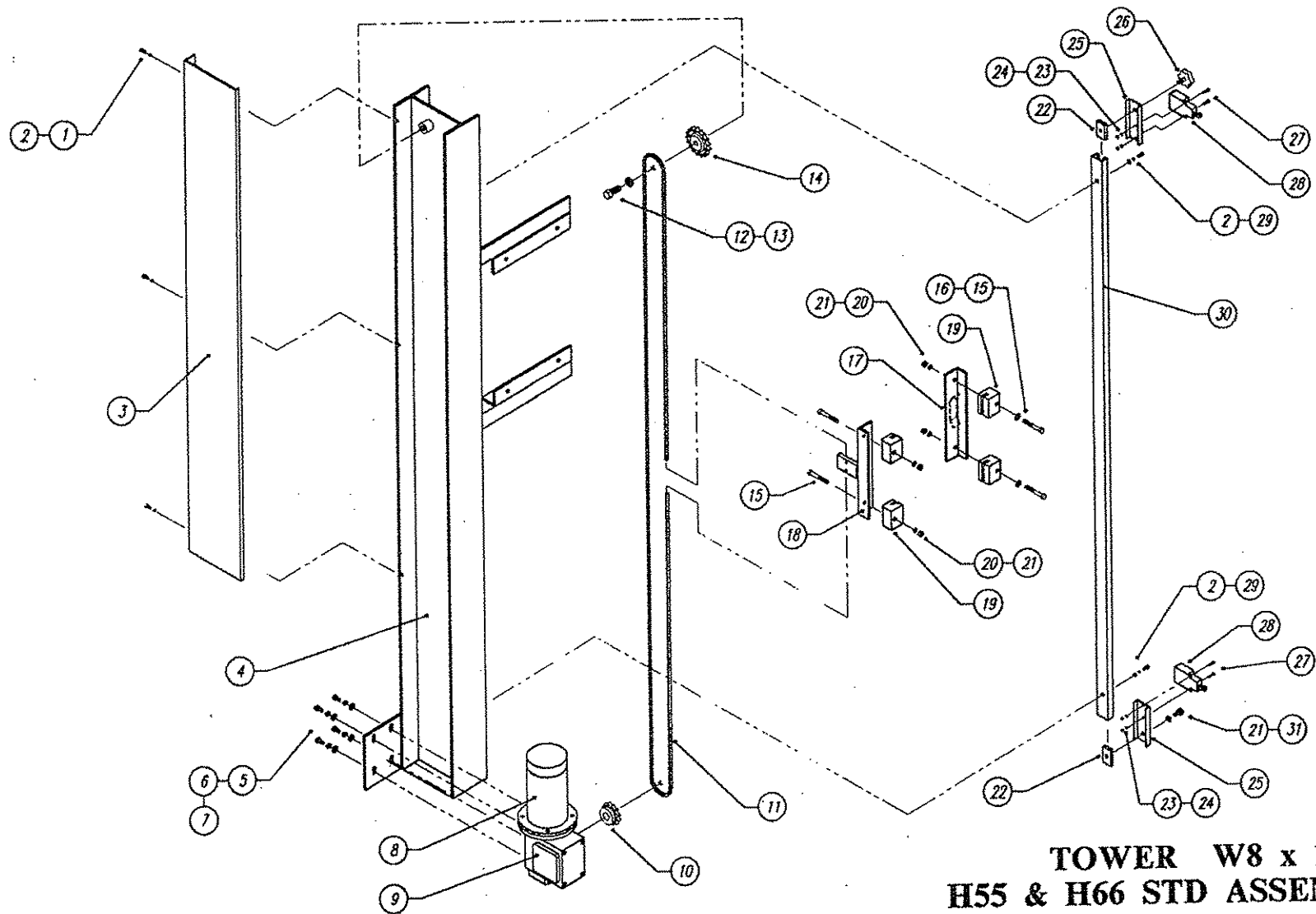
SCALE: 1 : 16

MACHINE TYPE: H66/11

DRAWING SIZE: B

DRAWING No.: 412401

ASSEMBLY ORG.: LAYOUT



TOWER W8 x 18 H55 & H66 STD ASSEMBLY

UPDATED MAY-17-95

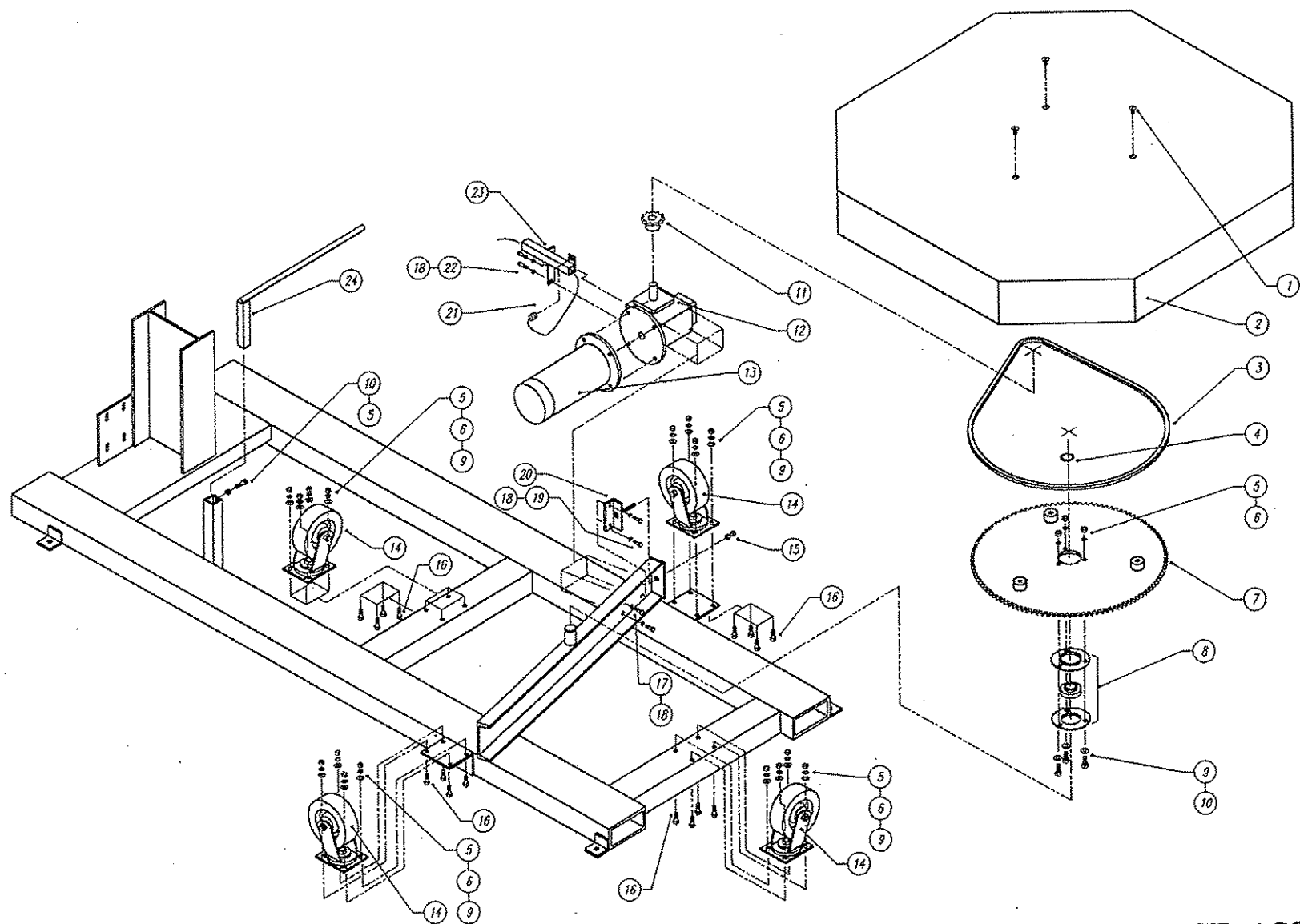
409165

TOWER W8 x 18 for H55, 66/10

STD ASSEMBLY PART LIST

Dwg. # 409165 updated Sep-28-95

NO.	PART #	DESCRIPTION	QTY
1.	012049	PAN PHILLSCREW	3
2.	011393	SPRING WASHER	5
3.	408187	TOWER CHAIN GUARD	1
4.	408914	TOWER W8x18	1
5.	012723	HEX HEAD SCREW	4
6.	012724	SPRING WASHER	4
7.	012725	FLAT WASHER	4
8.	010036	ELECTR. MOTOR	1
9.	010344	REDUCER	1
10.	010235	SPROCKET	1
11.	010009	CHAIN	1
12.	010329	HEX HEAD SCREW	1
13.	012721	SPRING WASHER	1
14.	010008	IDLER SPROCKET	1
15.	010401	HEX HEAD SCREW	4
16.	010948	FLAT WASHER	2
17.	408190	SLIDE BLOCK ALIGNING ANGLE	1
18.	408869	FILM CARRIAGE ATTACHMENT	1
19.	408193	SLIDE BLOCK	4
20.	011128	HEX NUT	4
21.	011390	SPRING WASHER	4
22.	220518	CHANNEL GUIDE	2
23.	012726	HEX NUT	4
24.	012743	SPRING WASHER	4
25.	260816	LIMIT SWITCH HOLDER	2
26.	010092	KNOB	1
27.	012690	PAN PHILL SCREW	4
28.	010123	LIMIT SWITCH	2
29.	010257	SOCKET HEAD CAP SCREW	2
30.	409047	LIMIT SWITCH CHANNEL	1
31.	012474	HEX HEAD SCREW	1



HIGH PROFILE H66/11 BASE ASS'Y

UPDATED JUN-21-96

412580

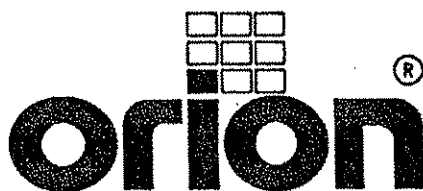
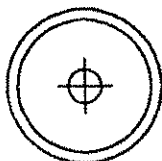
HIGH PROFILE H66/11 BASE ASS'Y - PART LIST

DWG #412580 updated Jun-21-96

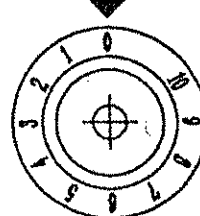
NO.	PART #	DESCRIPTION	Q'TY
1.	013363	FLAT SOCKET CAP SCREW	3
2.	412405	TURNTABLE 48" OCTAGONAL	1
3.	010009	CHAIN	1
4.	013655	EXT. RETAIN. SNAP RING	1
5.	011128	HEX NUT	20
6.	011390	SPRING WASHER	20
7.	406338	SPROCKET	1
8.	013654	STAMP HOUSING FL. BEARING	1
9.	010948	FLAT WASHER	23
10.	012406	HEX HEAD SCREW	3
11.	010435	SPROCKET	1
12.	010093	REDUCER	1
13.	010036	EL. MOTOR	1
14.	010876	SWIVEL CASTER	4
15.	011266	HEX NUT	2
16.	010293	HEX HEAD SCREW	20
17.	010291	HEX HEAD SCREW	2
18.	012724	SPRING WASHER	6
19.	012757	HEX HEAD SCREW	2
20.	412261	CHAIN TIGHTENER	1
21.	013848	PROXIMITY SWITCH	1
22.	010382	HEX HEAD SCREW	2
23.	410015	PROXIMITY SWITCH BRACKET	1
24.	403521	ROPING BAR	1

APPENDIX 2

START

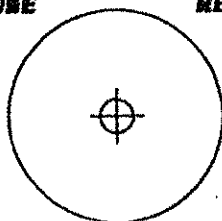


FILM TENSION



STOP

**1x
PAUSE**

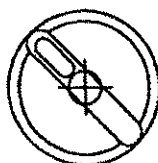


**2x
RESET**

UP

SPIRAL

UP/DOWN

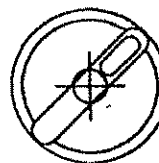


TOP WRAPS

2

1

3



**REINFORCE
WRAP**

**TOWER
T.TABLE
JOG**

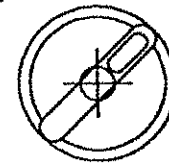
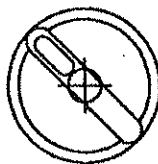
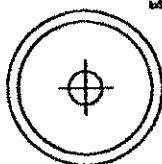
**PHOTOCELL
OFF ON**

BOTTOM WRAPS

2

1

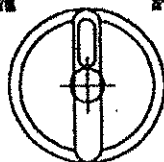
3



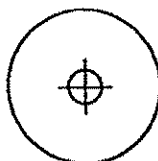
CARRIAGE

LOWER

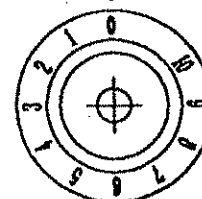
RAISE



POWER

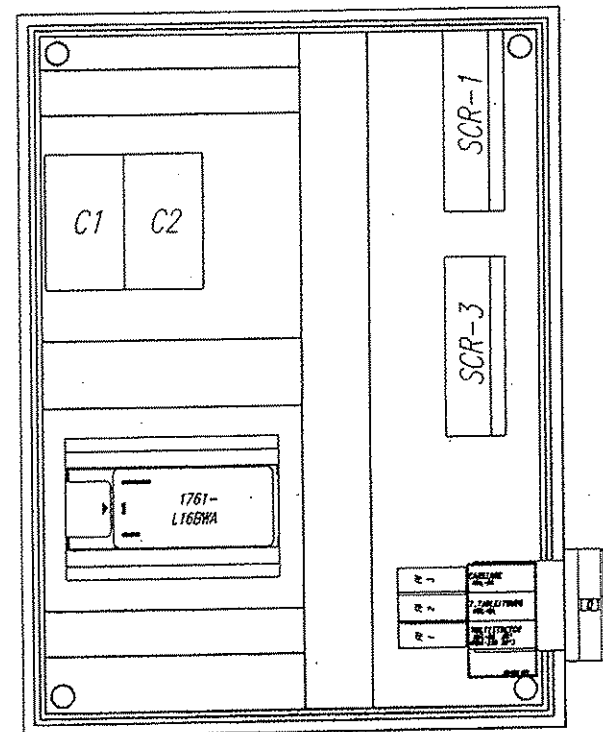
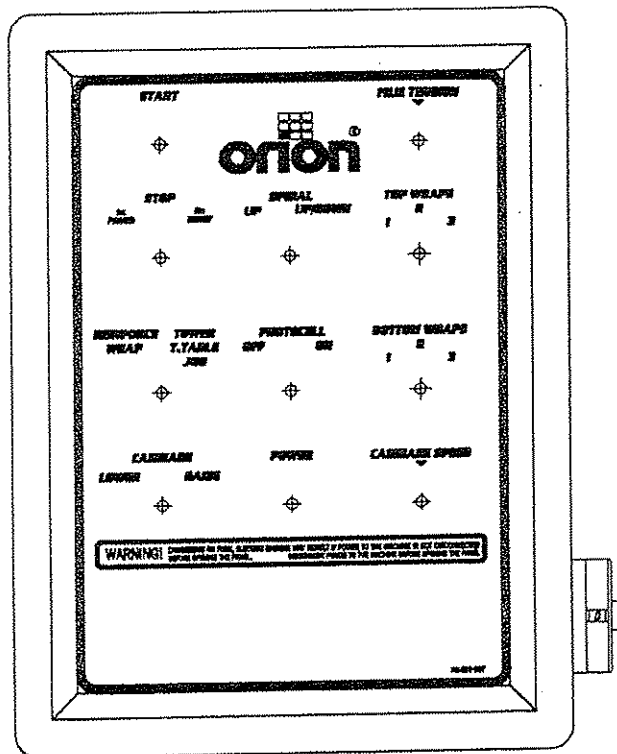


CARRIAGE SPEED



WARNING!

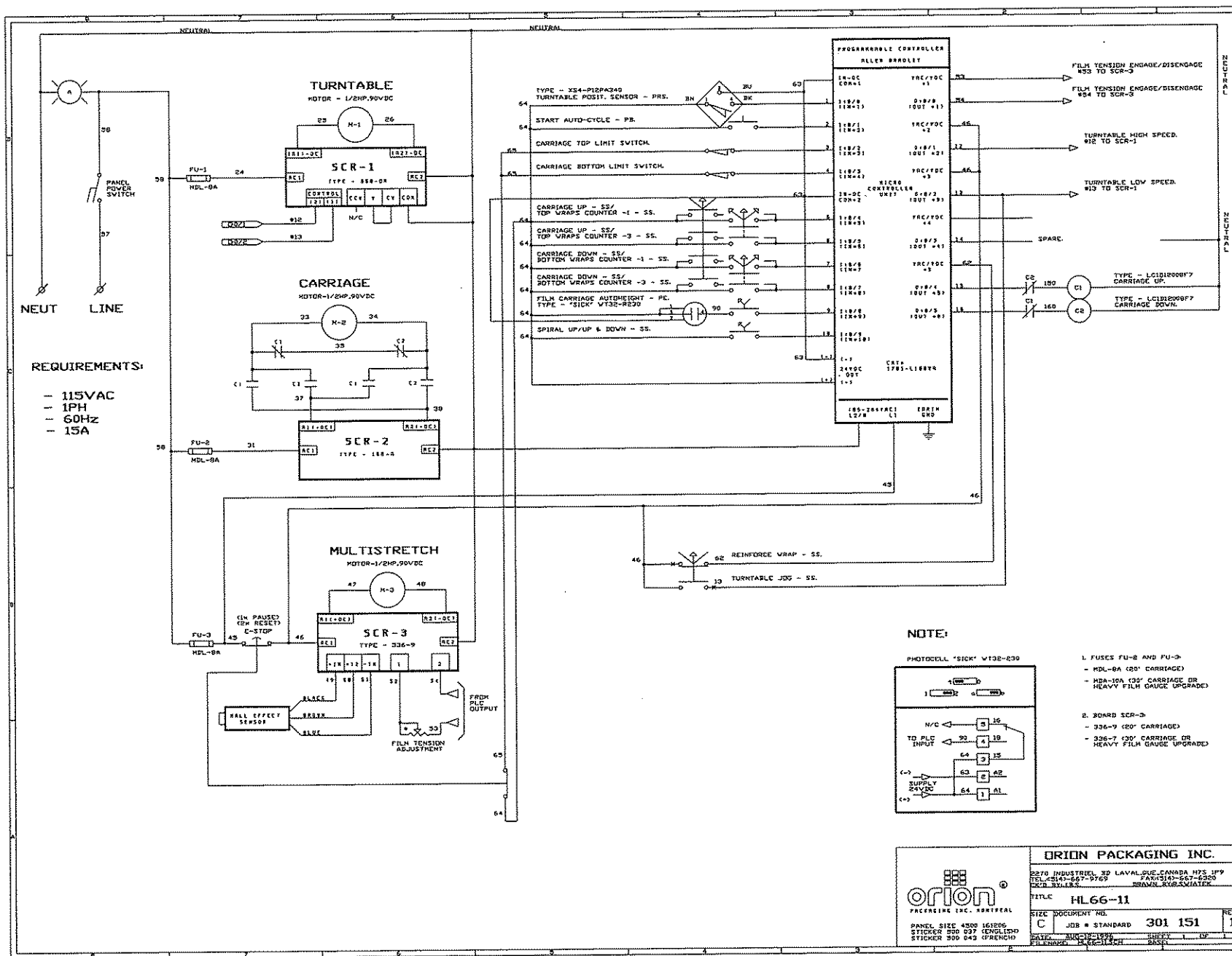
DANGEROUS OR FATAL ELECTRIC SHOCKS MAY RESULT IF POWER TO THE MACHINE IS NOT DISCONNECTED BEFORE OPENING THE PANEL. DISCONNECT POWER TO THE MACHINE BEFORE OPENING THE PANEL.



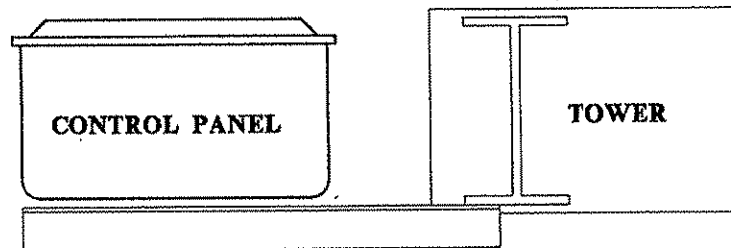
HL66-10 PANEL LAYOUT
16 x 12 x 06

NOTE: SCR-2 (168-A) IS LOCATED ON ENCLOSURE DOOR.

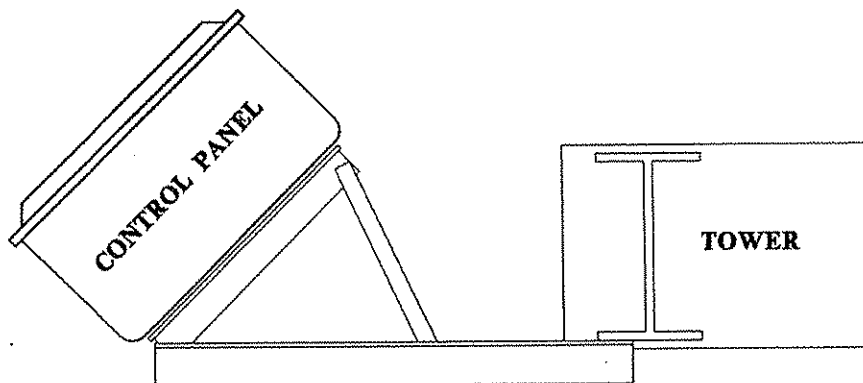
<p>ORION PACKAGING INC. 2270 INDUSTRIEL BOULEVARD, LAVAL QUEBEC, CANADA H1S 1P9 TEL (514) 667-9769</p>		ORION PACKAGING INC.	
		2270 INDUSTRIEL BOULEVARD, LAVAL, QUEBEC, CANADA H1S 1P9 TEL (514) 667-9769 FAX (514) 667-6320 APPRO. BY: J.S.S. DRAWN BY: A. ALEXANDER	
SIZE: C DOCUMENT NO.: 300 893/PL DATE: SEPT-18-1993 FILENAME: H66-10PL		SCALE: 1:2 TITLE: H/L66-10 SHEET: 1 OF 1 REV: 1	



In order to facilitate access and manipulation, the control panel can be mounted in two positions:

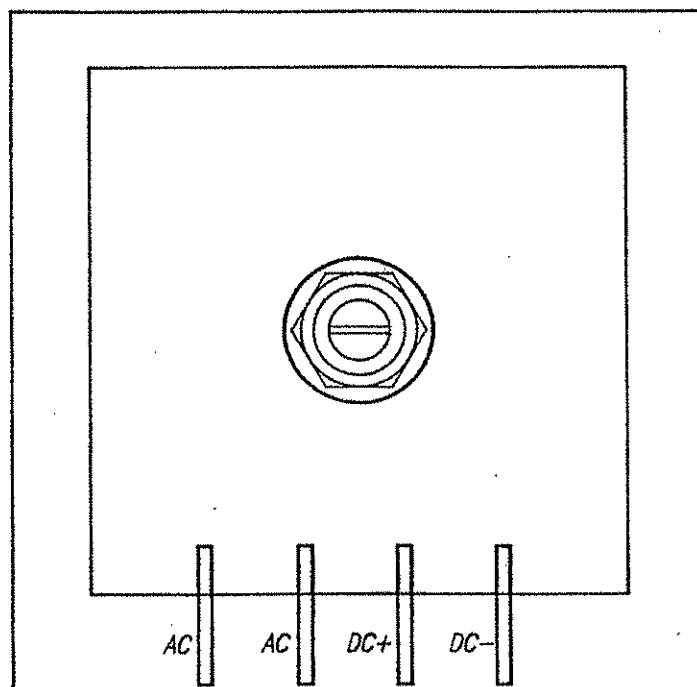


- 1. On the angle brackets aligned to the tower.**



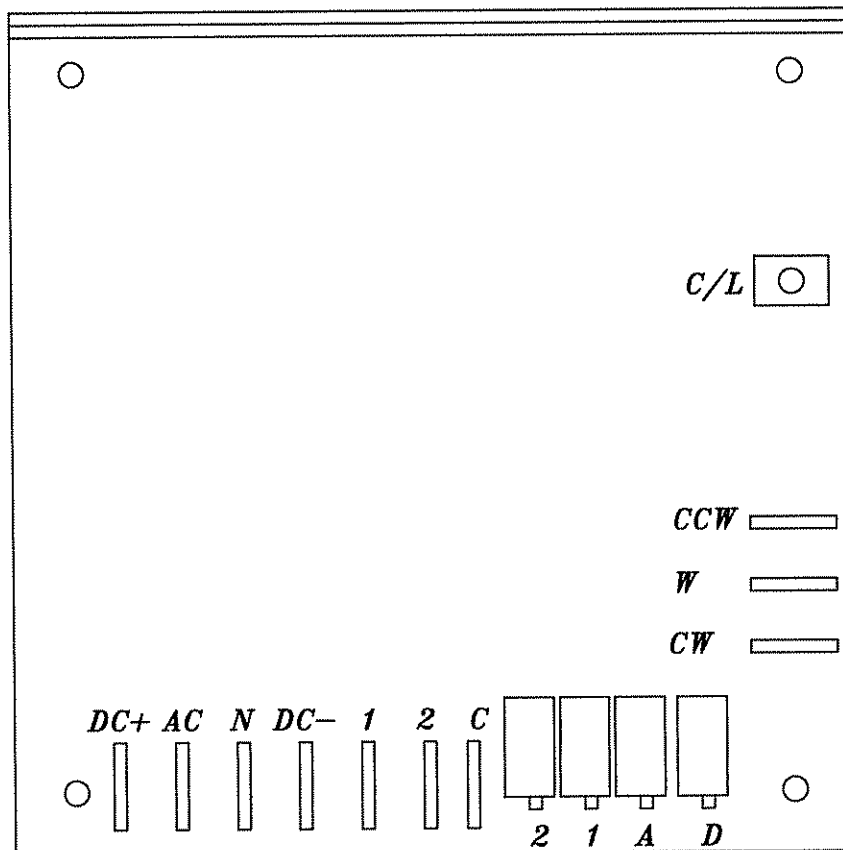
- 2. With the position bar (installed between upper angles), control panel can be rotated forward/to the side.
(additional screw is attached to the tower's foot)**

CONTROL PANEL MOUNT TWO POSITIONS



AC: AC INPUT
AC: AC INPUT
DC+: ARMATURE CONTROL
DC-: ARMATURE CONTROL

168-A
CARRIAGE SINGLE SPEED BOARD



DC+: ARMATURE CONTROL.

AC: AC INPUT - LINE.

N: AC INPUT - NEUTRAL.

DC-: ARMATURE CONTROL.

1: CONTROL - LINE. JOG SPEED

2: CONTROL - LINE. WRAP SPEED

C: CONTROL - COMMON.

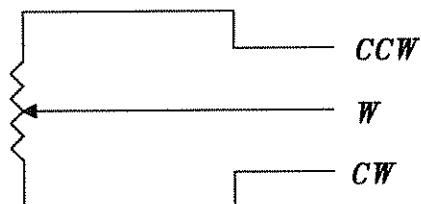
(REQUIRES A JUMPER TO "N")

MAX: MOTOR SPEED ADJUSTMENT.

ACC: ACCELERATION ADJUSTMENT.

C/L: CURRENT LIMITER.
(FACTORY SET)

NOTE: WHERE A REMOTE POT IS
NOT USED (CONVEYOR)
"W" & "CW" ARE SHORTED.



**850DM TWO SPEED 120VAC/90VDC
MOTOR CONTROL BOARD**

MULTISTRETCH 336-6/7/9 MOTOR CONTROL BOARD CALIBRATION INSTRUCTIONS

Bias: (RV3) The **RV3** pot controls the system bias.

This control injects an offset voltage that adds or subtracts from the voltage reference defined by the external tension adjustment (film tension potentiometer); this will allow extremes of adjustment to be set to levels consistent with proper operation. Typically, the bias will be used to center the operation range in the linear portion of its characteristics.

Note: This adjustment is normally factory pre-set and should not require field adjustment. For reference, the factory test procedure calls for a setting of 1.3 volts DC at the cathode of Z1 (Zener Diode) achieved by adjusting the **RV3** pot. Check for voltage between the (-IN) and the pin located next to the bias trim-pot.

Span: (RV1) The **RV1** pot controls the systems loop gain.

The system loop gain may be adjusted if the motor continues to be energized when the dancer roller is unloaded and at rest. With the machine stopped, the pot should be adjusted to ensure that the motor is de-energized in this condition, and so that a light pull on the free end of the film causes the film to feed freely. Counter clockwise (CCW) adjustment of this pot will increase the response time, in effect softening the motor tension response plus decreasing the maximum motor speed attainable. Clockwise (CW) adjustment will decrease the response time, in effect sharpening the motor response time plus increasing the maximum motor speed attainable.

Current Limit: (RV4) The **RV4** pot controls the torque (amperage) that the 336 board will allow to the motor.

To protect the unit against damage should the motor stall, jam, or current demands exceed its rating, a current limiting circuit is included which keeps motor current at a safe level regardless of motor load or input from the Hall effect proximity switch.

TURNTABLE & TOWER MOTOR CONTROL BOARD ADJUSTMENTS

66 & 55 SERIES EQUIPMENT (850M & 850DM Board)

INTRODUCTION

The 850M and 850 DM Motor Control Boards are DC/SCR drives that are used in 66 & 55 series Orion stretch wrapping equipment. The following calibration instructions apply to all 66 & 55 series turntable and rotary tower type machinery, but it will be important to note specific reference to your particular Orion model for best calibration results.

The 850M and 850DM boards feature two selectable pre-set speeds (1 & 2), and four potentiometers (marked 1,2,A and D).

The instructions are in the suggested order of adjustment, and intended to be made after installation of the board in the control enclosure. Please refer to the attached sketch of the board for identification of the adjustment points.

INSTALLATION

This unit is equipped with an aluminum chassis, which serves as a heatsink. This should be oriented with the printed circuit board in a vertical plane for optimum convection cooling.

Connectors are to .250" quick-disconnect terminals. Standard units require 120 VAC supply. AC line attaches to terminals **AC1**, **AC2**. Motor Armature attaches to terminals **DC+**, **DC-**. The standard unit is suitable for permanent magnet shunt style DC motors with 90 V armature rating.

ADJUSTMENTS

Acceleration: (RV3) The pot marked **A** is the control for the acceleration or electronic soft start feature.

For an initial setting, turn the **A** pot fully counter-clockwise (CCW) until a faint “clicking” sound is heard, then approximately 2 turns (or revolutions) clockwise (CW). CW adjustment of this potentiometer softens the start and lengthens the time required for the turntable/tower to reach its preset speed.

Speed Control: (RV1) The pot marked **1** controls the turntable/tower jog speed¹.

Simply activate the turntable/tower jog function, adjusting the jog speed (pot 1) as the turntable/tower rotates. This should be set for approximately 2 to 3 RPM. Please note that this setting should be made with a load on the turntable (turntable type models only). A CW turn increases the jog speed, while CCW decreases jog speed.

Speed Control: (RV2) The pot marked **2** is the control for the high speed² for the turntable/tower during the wrap cycle once acceleration is complete.

This speed can be as high as 12 RPM. However, you should note that if it is set too high, you may see chopping of the current to the turntable/tower drive motor which will cause pulsating, half-speed operation of the turntable/tower drive itself. If this is seen, please decrease the setting of pot **2**, until it is no longer in effect.

For best calibration results, it is recommended that you make this adjustment while the machine is in cycle. After starting a wrap cycle, set the film carriage speed control to the “0” (minimum) position. This will prevent the film carriage from rising and completing its cycle. Then simply adjust the high speed (pot **2**) as the turntable/tower rotates. A CW turn increases speed, a CCW turn decreases speed.

- 1** Speed Control 1 = Turntable/Tower Jog Speed
Selected by a 120 VAC signal applied from terminal (1) to (C)
- 2** Speed Control 2 = Turntable/Tower High Speed
Selected by a 120 VAC signal applied from terminal (2) to (C)

Deceleration: (RV4) The pot marked **D** is the deceleration control. Functionally, it is the opposite of acceleration, except that it is a more critical setting, in that our machine logic requires that we decelerate from speed 2 to speed 1 during the course of the final revolution of the turntable/tower before shutoff.

For an initial setting, start with the **D** pot set fully CCW. Then, cycling the machine; observe the transition to jog speed at the end of the cycle, prior to the stop of the turntable/tower at the home position. Gradually increase the **D** pot setting (CW) until the turntable/tower only jogs approximately 1/8 to 1/4 revolution before reaching home position. CW adjustment of this potentiometer quickens the stop and shortens the deceleration time required for the turntable/tower to settle to its preset jog speed. CCW softens the stop and lengthens the time required for the turntable/tower to settle to its preset jog speed.

Thus, the deceleration control is important in that if the deceleration time is too short, we will prematurely reach jog speed and jog an excessive amount of time to the home position before shutoff.

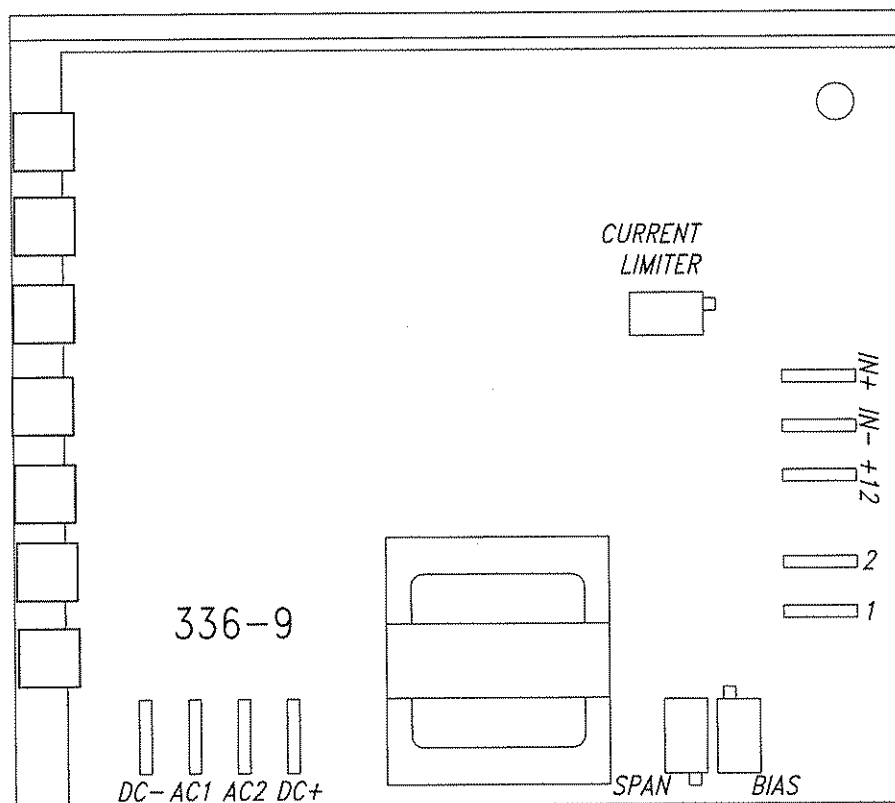
Conversely, if the deceleration time is set too long, the turntable/tower will not settle to the jog speed and thus will be going too fast to align properly and the momentum will take the turntable/tower beyond the start position. As you can imagine, any time the wrap speed is changed, you will need to make a corresponding change in the setting of the pot marked **D** (for deceleration).

Note: The 850DM requires a jumper from the **W** pin to the **CW** pin for speed 2 to operate.

TROUBLE SHOOTING & REPAIR

In most cases, repair will require parts replacement. If user intends to, and is equipped to perform repairs, spare parts are available from Orion Parts & Service.

Damage is usually visually evident on the 850M board. Replacing the obviously damaged board frequently restores operation. However, if damage is not evidently visible, swapping boards will determine if the board is at fault.



DC+: ARMATURE CONTROL

AC1: AC INPUT

AC2: AC INPUT

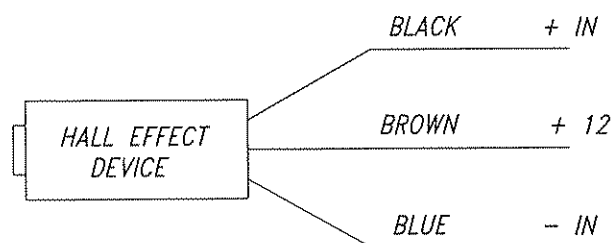
DC-: ARMATURE CONTROL

POTENTIOMETER

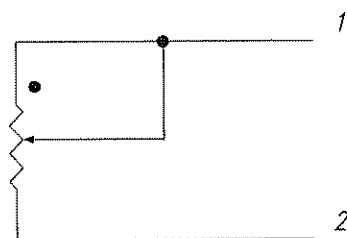
SPAN: HALL EFFECT SENSITIVITY CONTROL

BIAS: SYSTEM BIAS (FACTORY SET)

CURRENT LIMITER: (FACTORY SET)



FILM TENSION ADJUSTMENT
REMOTE POTENTIOMETER



336-9
MULTISTRETCH BOARD

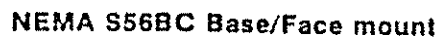
This pot is factory pre-set to suit ½ HP motors. Should changes be required in the field, proceed as follows: Monitor the motor current. Turn the current limit **RV4** to minimum (full CCW). Stall the motor. Advance the pot slowly until the desired current is achieved. This should not exceed 125% of the motor nameplate rating. Do not stall the motor for more than a few seconds, or damage may occur.

APPENDIX 3

TEFC P/M motor



H.P.	RPM	VOLTS	AMPS	L	DUTY
1.5	1800	180	8.2	15½	CONT.
2	1800	180	11.6	16½	CONT.



H.P.	RPM	VOLTS	AMPS	L.	DUTY
1/2	1725	180	2.8	10 3/4	CONT.
3/4	1725	180	3.5	12 3/4	CONT.
1	1725	180	5.35	14 3/4	CONT.

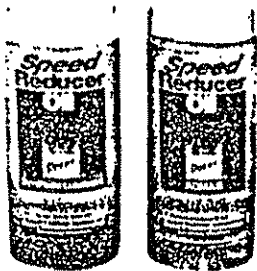
H.P.	RPM	VOLTS	AMPS	L	BUFFY
1/2	1725	90	5.35	10 3/4	CONT.
3/4	1725	90	8.1	12 3/4	CONT.
1	1725	90	10.6	14 3/4	CONT.

lubrication

REDUCERS MAY BE FILLED TO THE PROPER LEVEL AT THE FACTORY WITH AGMA No. 8 compounded oil. AFTER INSTALLATION OF THE BREATHER PLUG, UNIT IS READY FOR USE. Before installing breather plug, refer to instruction tag and determine proper position according to reducer mounting.

We recommend an initial oil change after 250 hours of operation, then every six months or every 2500 hours of service under Class I Service. If fluctuating temperatures, humid, dirty or corrosive environment, oil changes should be made more frequently. Frequency can be established by oil sample analysis.

KEEP YOUR OIL CLEAN



Doerr Electric replacement oil

To order oil, request:

Doerr part no. 00019001 — synthetic AGMA #7EP
(-40°F to 150°F)

Doerr part no. 00019101 — AGMA #8 (50°F to 125°F)

Oil is packed 12 one quart bottles per carton, minimum ship one carton.

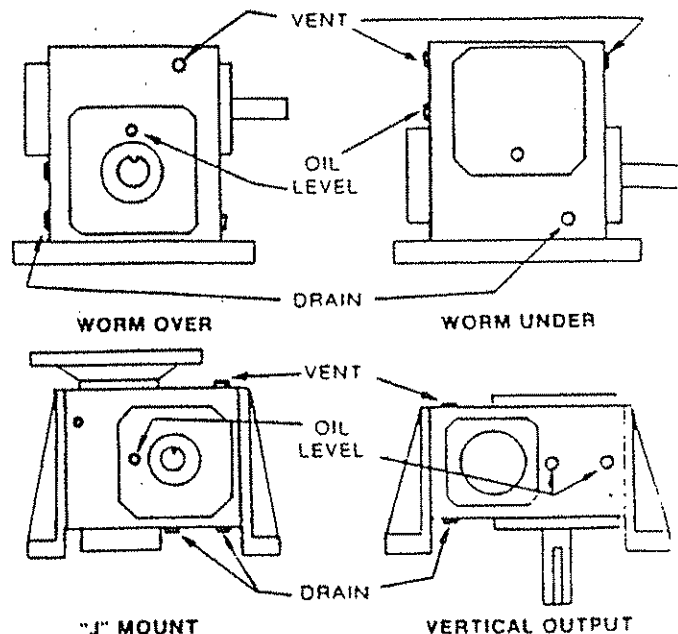
Contact DEC Service Dept. for order information.

OIL CAPACITIES*

UNIT TYPE	UNIT SERIES			
	133	175	200	202
Worm Over	14	20	27	49
Worm Under	17	22	28	49
Vertical Output	10	15	20	37
"J" Mount	13	18	23	38

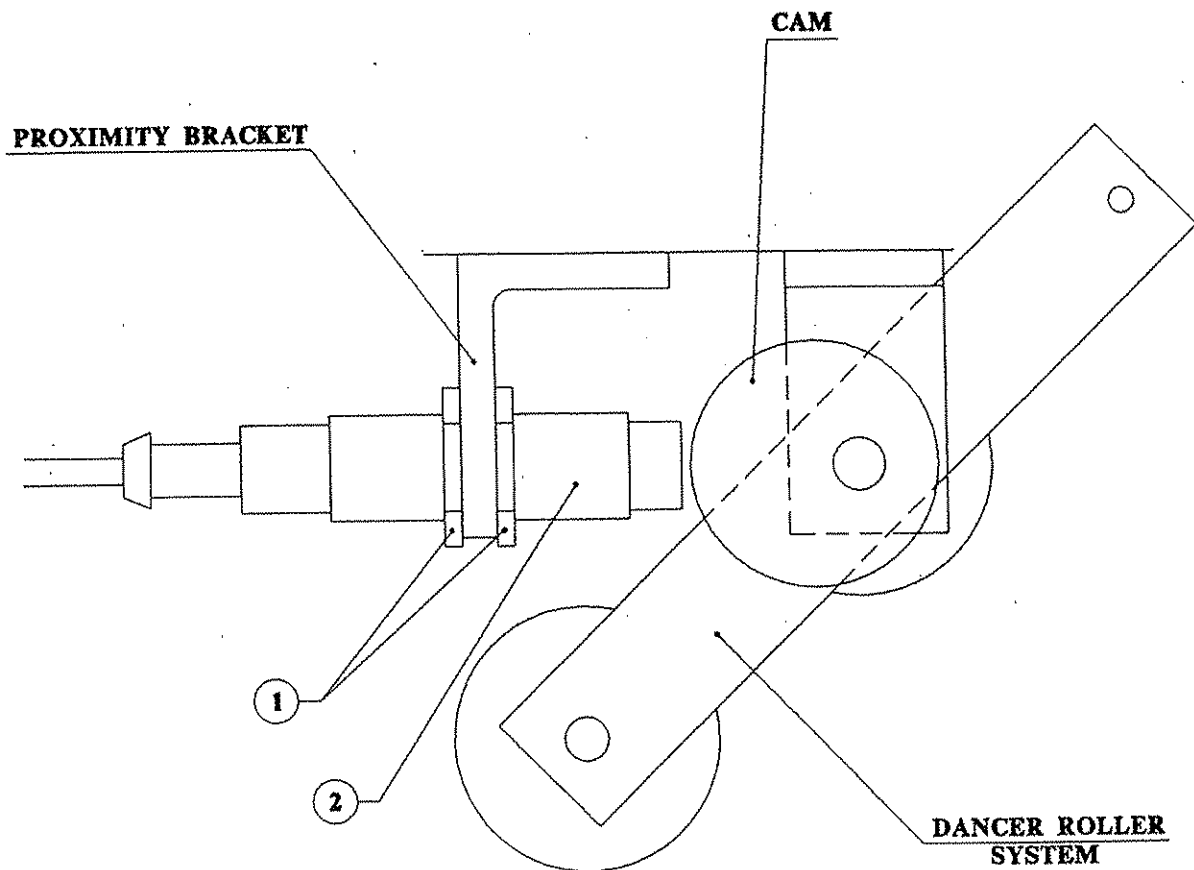
*Capacities in approximate ounces. On double reduction units determine capacity of both primary and secondary reducers.

OIL LEVELS*



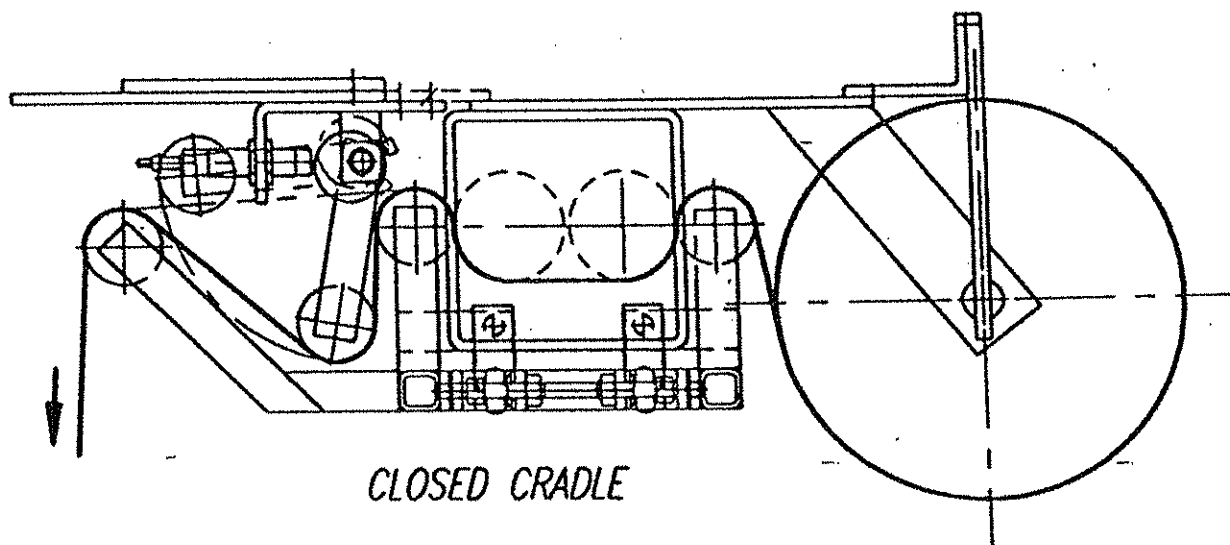
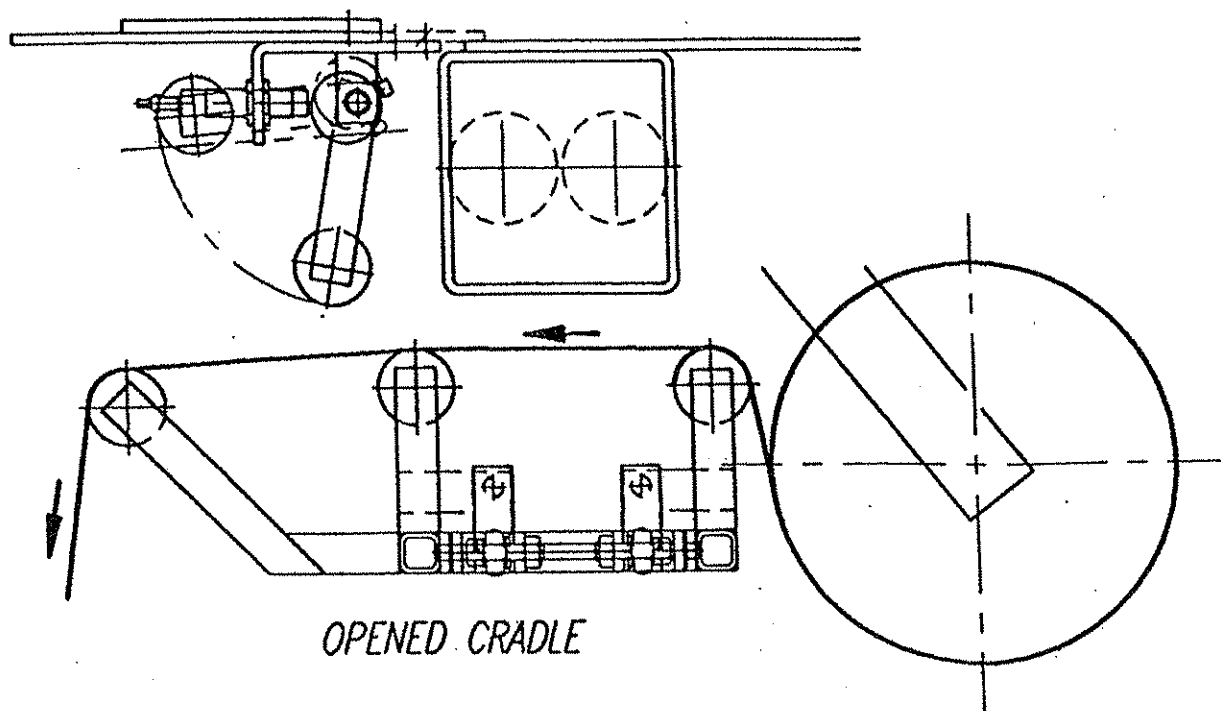
*On double reduction units fill and vent each unit to levels shown.

APPENDIX 4



PROXIMITY SENSOR FEED BACK ADJUSTMENT

DWG. # 001



FILM QUICK THREADING

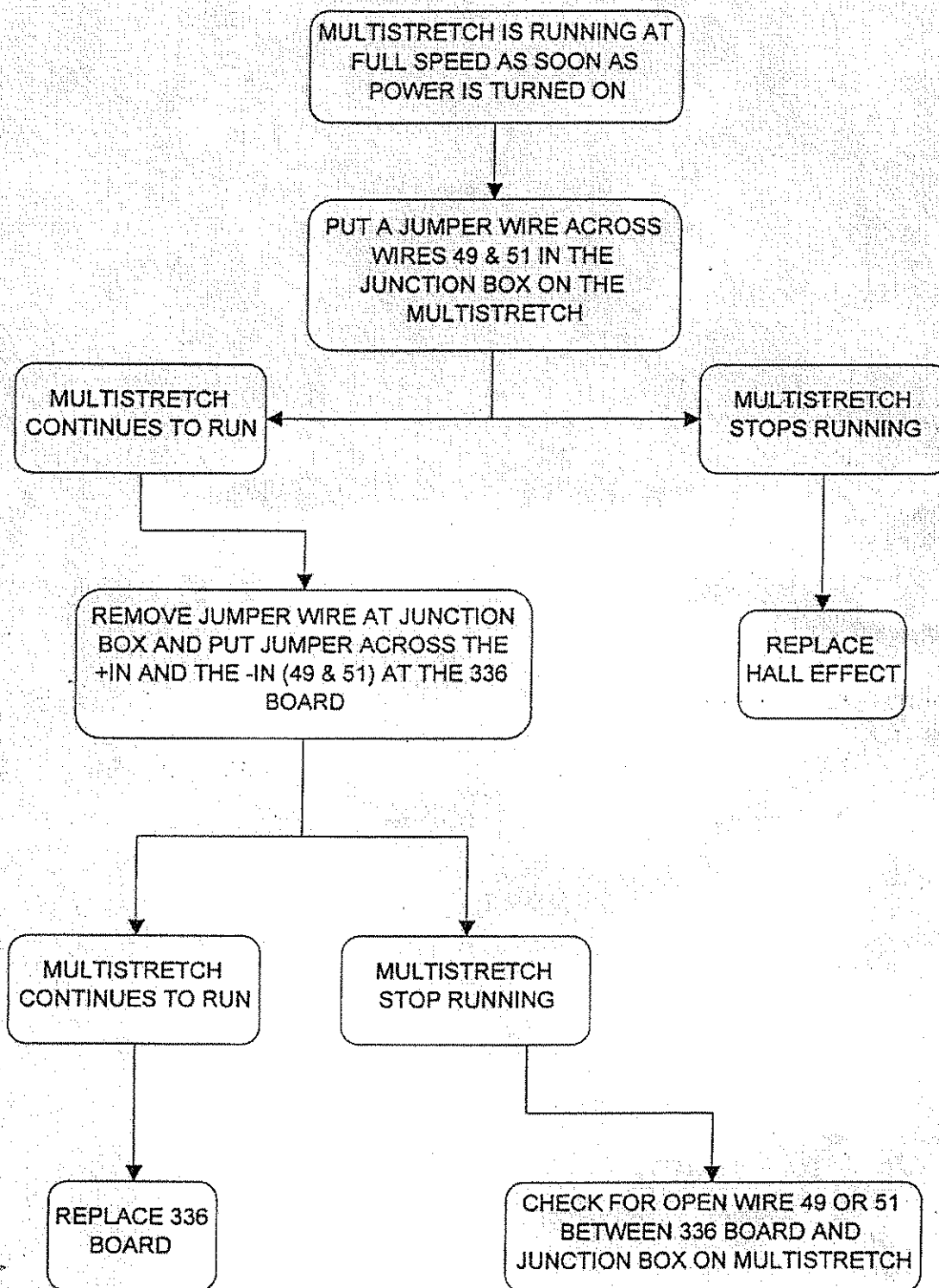
Proximity Sensor Adjustment

Occasionally the Feed Back Proximity Sensor may need some adjustment. The position of the feed back proximity sensor against the cam is shown on drawing # 001 (Appendix 1)

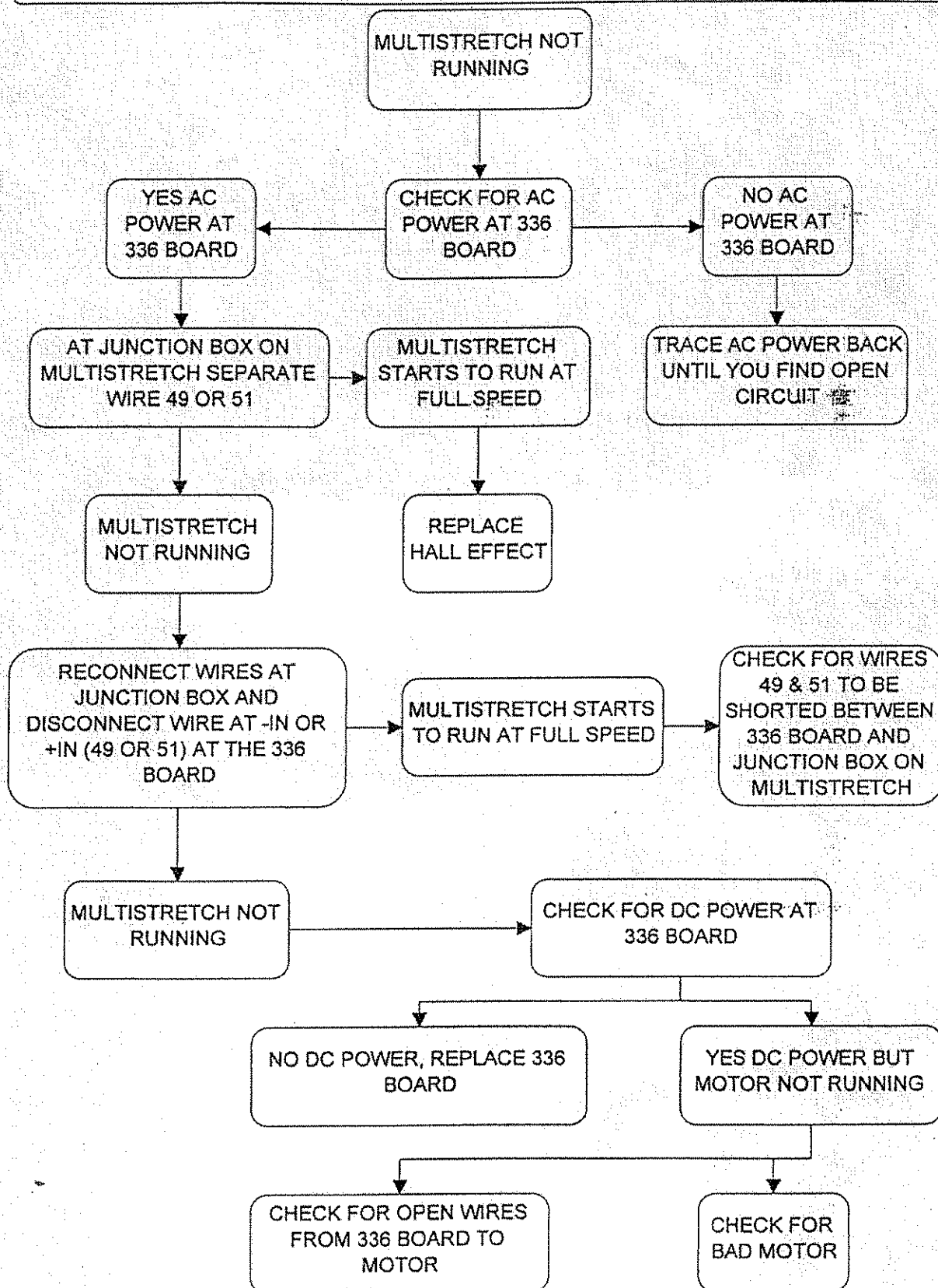
Adjustment instructions:

- remove the carriage cover
- unbolt the two nuts holding the proximity switch -item # 1
- turn the Proximity sensor - (item # 2) to create the gap between the cam and the front side of proximity sensor about 1/8 ".
- tighten on the nuts securing the Proximity Sensor.
- turning the trim pot SPAN (Board 336-7) adjust the moment when motor starts to turn when dancer roller moved from its home position up to 1 1/2".

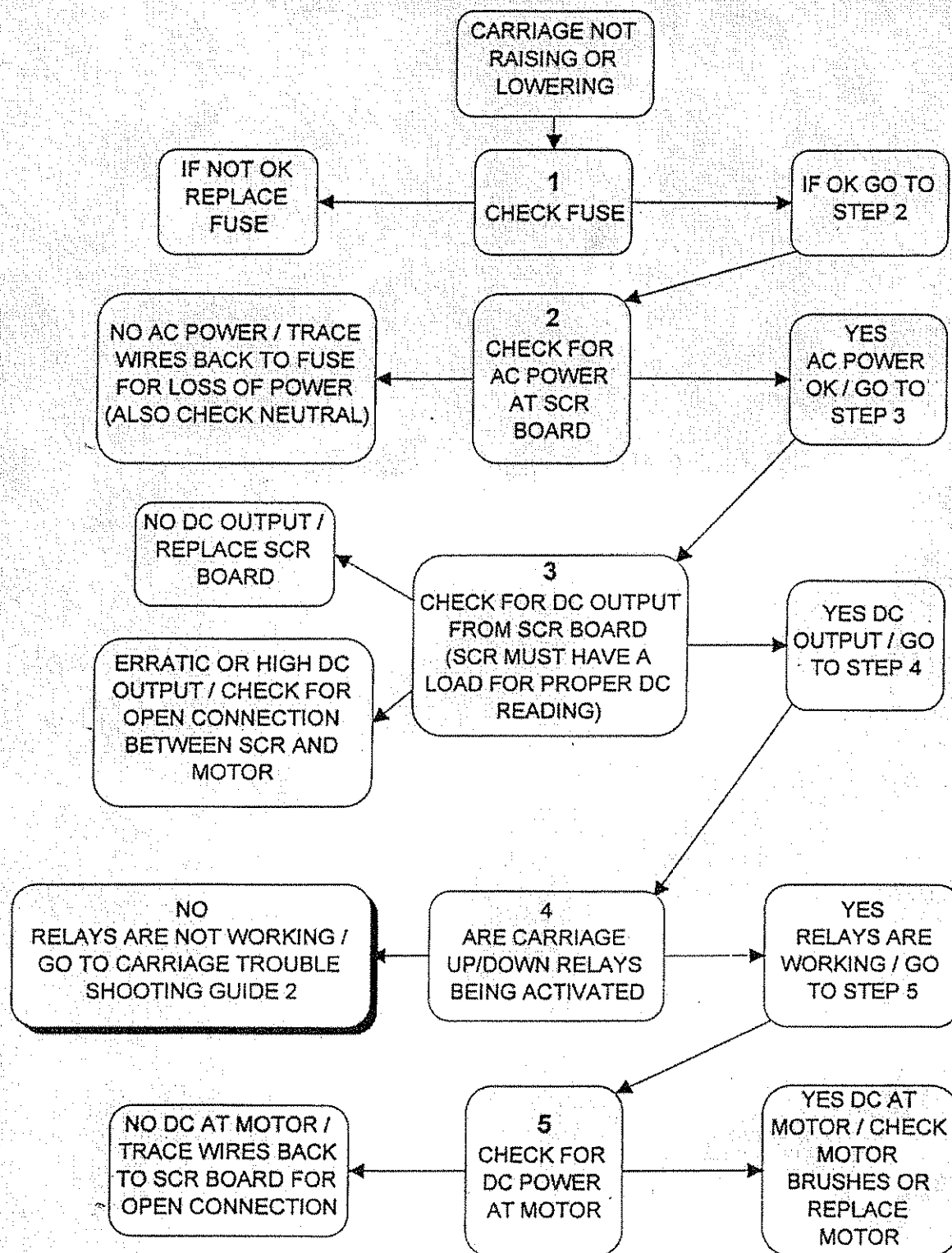
APPENDIX 5

MULTISTRETCH TROUBLE SHOOTING GUIDE 1

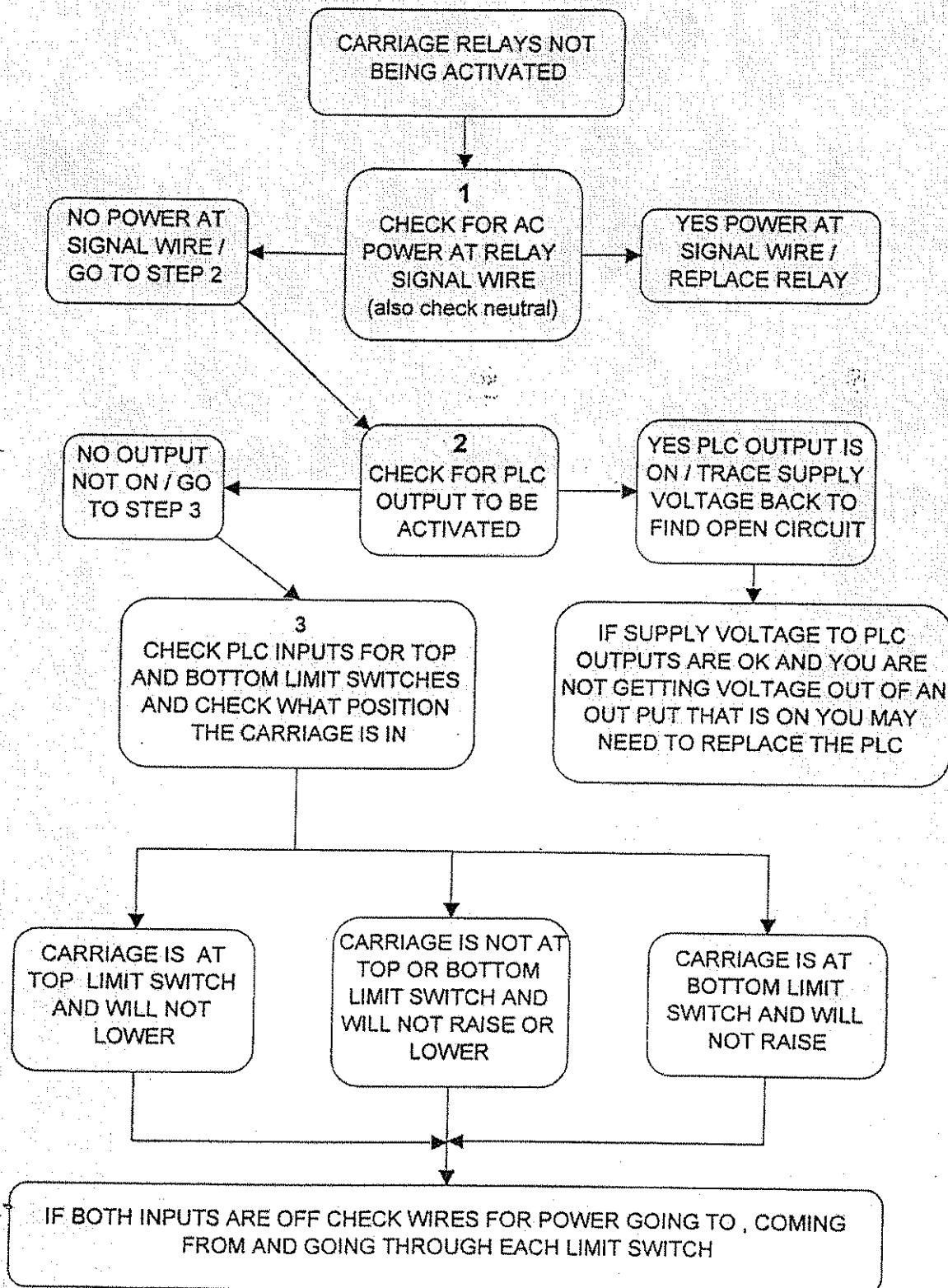
MULTISTRETCH TROUBLE SHOOTING GUIDE 2



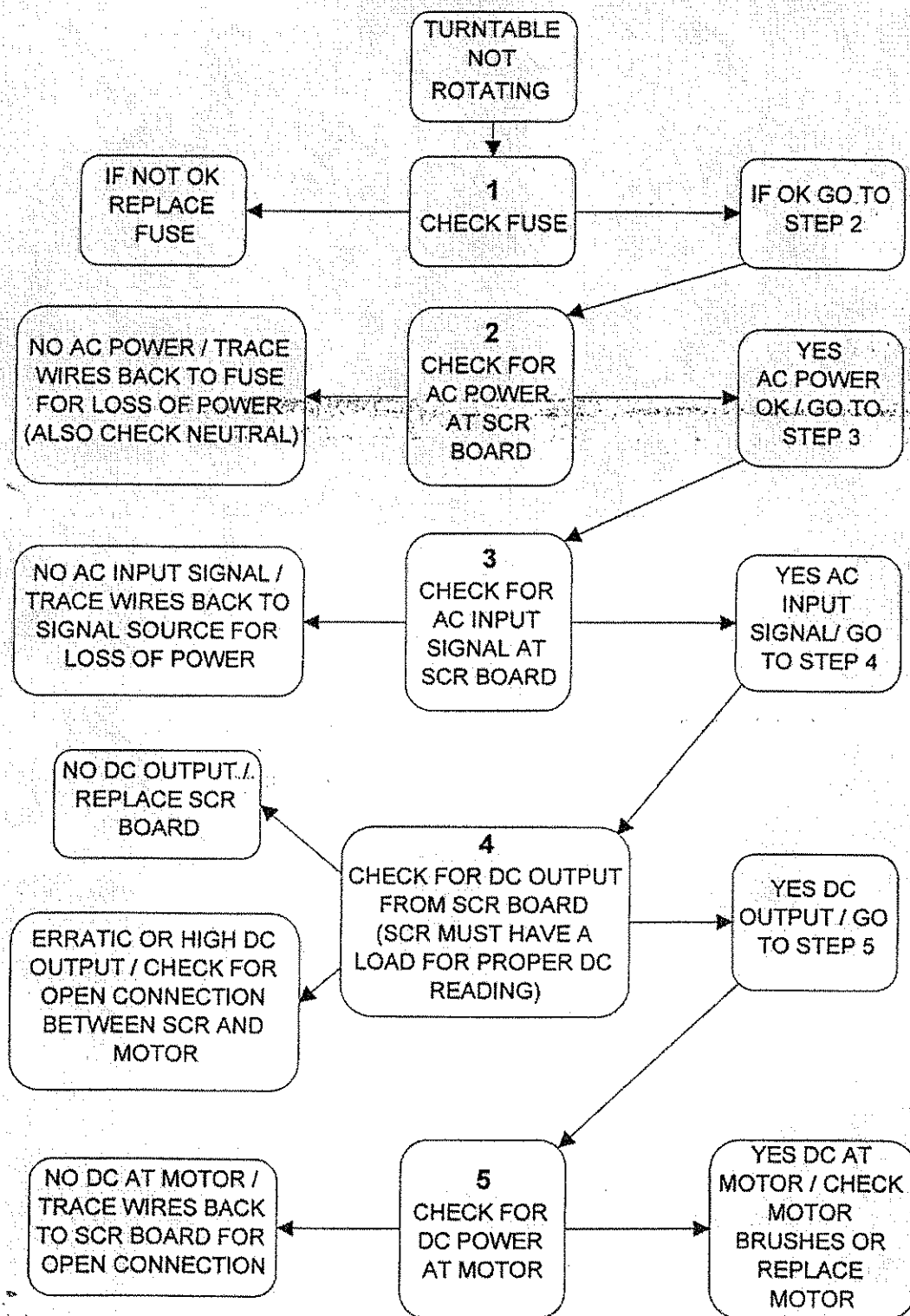
1 BASIC CARRIAGE RAISE/LOWER TROUBLE SHOOTING GUIDE



2 BASIC CARRIAGE RAISE / LOWER TROUBLE SHOOTING GUIDE



BASIC TURNTABLE TROUBLESHOOTING GUIDE



- IF TURNTABLE RUNS AS SOON AS POWER IS TURNED ON THE MOTOR MAY HAVE AN INTERNAL SHORT TO GROUND.